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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,922	11/06/2001	Tom S. Farnakis	20369.DIV	7026

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EXAMINER

ZANELLI, MICHAEL J

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,922

Applicant(s)

FARMAKIS ET AL.

Examiner

Michael J. Zanelli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This application is acknowledged as a Divisional Application of S.N. 08/291,564, filed 8/16/94. Claims 1-17, which were originally filed in the '564 application and cancelled in response to the first Office action mailed 4/5/95, have been resubmitted in this application.

2. Applicant is requested to update the related application information on page 2 of the specification.

3. The prior art cited in the parent application has been considered. If applicant wishes documents cited in the parent to be listed on the issued patent, a PTO-1449 must be submitted. MPEP 609.

4. The application is objected to because of alterations which have not been initialed and/or dated as is required by 37 CFR 1.52(c). A properly executed oath or declaration which complies with 37 CFR 1.67(a) and identifies the application by application number and filing date is required. The application as filed contains alterations on pages 12, 15, 36, 44 and 45 of the specification as well as claims 2, 6, 9, 11, 12, 15 and 17. Although it appears the claims have markings suggesting they have been cancelled, at this time all claims have been treated on the merits.

5. Claims 1-6 are objected to because of the following informalities:

A. As per claim 1, at line 8 the claim should read "a direct radio message" or "direct radio messages".

B. As per claim 2, at line 3 change the semicolon to a period.

C. As per claim 4, at line 4 change the period to a semicolon.

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D. All claims depending from an objected base claim are also objected to as containing the same deficiencies.

6. Claims 2, 3 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claim 2, "said first vehicle evasive maneuver" lacks antecedence.

B. As per claim 3, "said second vehicle evasive maneuver" lacks antecedence.

C. As per claim 7, at line 5 the claim is unclear whether the navigational signals recited are limited to the navigational "satellite" signals recited in the preamble or some other type of navigational signals.

D. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,314,366. Although the

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conflicting claims are not identical, they are not patentably distinct from each other because both the patented claim and the application claims are directed to a method of collision avoidance which includes exchanging position information between a first and second vehicle over a data communication link and producing an evasive maneuver as a result of the exchanged information.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Fraughton et al. (5,153,836).

A. First, the examiner wishes to acknowledge the Board of Patent Appeals and Interferences (Board) decision rendered October 13, 2000 relative to the claims at issue in the '564 parent application, now U.S. Patent No. 6,314,366. In that decision, the Board indicated that the Fraughton patent did not disclose the generation of collision evasive maneuvers or the coordinated transmission of same with other aircraft (Dec., page 6). However, the Board did interpret Fraughton to disclose the exchange of position information between aircraft and suggested the exchange of navigational information whereby a pilot can take appropriate action (Dec. page 5). Thus, the rejection applied against claims 1-12 and 17 as originally filed in the parent application, and resubmitted here, must be reevaluated in view of the Board's comments relative to specific claim language and the teachings of Fraughton.

B. As per claim 1, as noted above the Board determined that Fraughton discloses the exchange of navigation (position data) between aircraft and that the pilot could determine an evasive maneuver based on the information. In particular, Fraughton discloses using satellite navigation signals (GPS) and radio communication links to exchange positional and identification information between aircraft for the purpose of collision avoidance (Abs.). The exchanged information allows the pilot to make or determine an appropriate action (i.e., evasive maneuver) (col. 5, lines 26-37). Note that claim 1 does not require the "generation" of an evasive maneuver or exchanging an evasive maneuver with the other aircraft.

11. Claims 1, 4, 7, 8, 11, 12 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wysocki et al. (5,381,338).

A. As per claims 1 and 11, Wysocki discloses a vehicle collision avoidance system and method in which the position of one or more vehicles is determined using satellite navigation signals (Fig. 1:1; col. 10, lines 66-68). Transceivers (Fig. 1:19) are provided for exchanging position and identification information between the vehicles (col. 11, lines 23-25) and processed to provide the vehicle operator with relative position and heading of other vehicles relative to the operator's own vehicle such that evasive maneuvers may be determined (col. 11, lines 50-60). The system is computer-based and operates according to executable programs which enable the processing and transmission of data between the one or more vehicles (col. 11, lines 25-66). With regards to claim 7, Wysocki further discloses that the position and identification

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information may also originate from structures (i.e., "fixed" positions) and be included in the collision avoidance processing (col. 11, lines 50-60).

B. As per claims 4, 8 and 12, as above wherein Wysocki discloses providing both visual and aural outputs to alert a user of the position, distance, heading, etc. of other vehicles and/or structures (Fig. 1:15,16; col. 11, lines 50-60; col. 12, lines 58-68).

The system also provides a means (Fig. 1:10) for allowing a user to program and/or control the collision avoidance system.

C. As per claim 17, as above whereby the radio communications between vehicles are direct, wireless communications (i.e., no intervening repeaters/transceivers) and that the position determining means may be comprised of earth-based transmitting beacons (col. 9, lines 46-50).

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

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later invention was made in order for the examiner to consider the applicability of 35

U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 5, 6, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wysocki.

A. As per claims 5 and 6, Wysocki discloses that the collision avoidance system may be used in a variety of vehicles such as aircraft and ships (Abs.) and that the position determining means may be comprised of earth-based transmitting beacons (col. 9, lines 46-50). Wysocki further discloses that evasive maneuvers may be automatically generated if the vehicle operator does not act in response to the visual and aural alerts (col. 12, lines 58-68). The claimed invention differs in that if the vehicle is an aircraft, altitude changes are performed whereas if the vehicle is a sea going vessel, course changes are performed. However, one of ordinary skill in the art would have found it obvious that the evasive maneuvers referred to by Wysocki (*supra*) would have been dependent upon the vehicle concerned. Thus, one of ordinary skill in the art would have recognized that if the vehicle was an aircraft, evasive maneuvers would include three-dimensional course changes whereas an automobile or ship would have included two-dimensional course changes.

B. As per claims 15 and 16, as noted above Wysocki discloses a computer-based collision avoidance system which performs functions based on executable programs. One of ordinary skill in the computer-based control systems art would have readily recognized that the disclosed functions could be performed by a single processing

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device or multiple processing devices whereby costs, modularity and processing power/speed would have been design considerations.

14. Claims 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Claims 9 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited documents are of general interest.

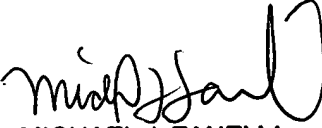
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (703) 305-9756. The examiner can normally be reached on Monday-Thursday 8:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/mjz



MICHAEL J. ZANELLI
PRIMARY EXAMINER